

AMENDMENTS TO THE CLAIMS

1. (currently amended): A hinge mechanism for a variable displacement compressor comprising:

a rotor adapted to be mounted on and rotated by a drive shaft, said rotor having at least one arm extending outwardly therefrom;

a hub adapted to be mounted on the drive shaft and to rotate with said rotor, said hub having at least one arm extending outwardly therefrom towards said rotor and adjacent the arm of said rotor; and

at least one shoe disposed between the arm of said rotor and the arm of said hub, said shoe adapted to be seated in a pocket formed in at least one of the arm of said rotor and the arm of said hub, wherein said shoe facilitates a slanting of said hub and transfers rotation from said rotor to said hub; ~~hub; and~~

a pin, wherein an other of the arm of said rotor and the arm of said hub has a slot formed therein to receive said pin, said shoe has a central aperture formed therein, and the at least one of the arm of said rotor and the arm of said hub has an aperture formed therein, said pin adapted to be received in the aperture of the at least one of the arm of said rotor and the arm of said hub, the aperture of said shoe, and the slot of the other of the arm of said rotor and the arm of said hub to form a hinge connection between said rotor and said hub.

2. (original): The hinge mechanism according to claim 1, further comprising a guide disposed between said hub and the drive shaft.

3. (original): The hinge mechanism according to claim 2, wherein said guide is hollow.

4. (canceled)

5. (original): The hinge mechanism according to claim 1, wherein said shoe has a semi-spherical surface formed on a first side to engage the pocket formed in at least one of the arm of said rotor and the arm of said hub, and said shoe having a flat surface formed on a second side to slidingly engage the other of the arm of said rotor and the arm of said hub.

6. (original): The hinge mechanism according to claim 1, wherein an other of the arm of said rotor and the arm of said hub has at least one slot formed therein to slidingly receive said shoe.

7. (canceled)

8. (currently amended): A variable displacement swash plate type compressor comprising:

- a cylinder block having a plurality of cylinders arranged radially therein;
- a plurality of pistons, one of said pistons reciprocally disposed in each of the cylinders of said cylinder block;
- a cylinder head attached to said cylinder block;
- a crankcase attached to said cylinder block and cooperating with said cylinder block to define a crank chamber;
- a drive shaft rotatably supported by said crankcase and said cylinder block in the crank chamber;
- a rotor mounted on said drive shaft;
- a swash plate assembly slidably mounted on said drive shaft to thereby change an inclination angle thereof in response to changes of pressure in the crank chamber, said swash plate assembly operatively engaged with said pistons to reciprocally drive said pistons;
- a hinge mechanism disposed between said rotor and said swash plate assembly for changing the inclination angle of said swash plate assembly,

wherein said hinge mechanism further comprises:

at least one arm extending outwardly from said rotor towards said swash plate assembly;

at least one arm extending outwardly from said swash plate assembly towards said rotor and adjacent said arm of said rotor; and

at least one shoe disposed between said arm of said rotor and said arm of said swash plate assembly, said shoe adapted to be seated in a pocket formed in at least one of said arm of said rotor and said arm of said swash plate assembly, wherein said shoe facilitates inclination of said swash plate assembly and transfers rotation from said rotor to said swash plate assembly; assembly; and

a pin, wherein an other of said arm of said rotor and said arm of said swash plate assembly has a slot formed therein to receive said pin, said shoe has a central aperture formed therein, and the at least one of said arm of said rotor and said arm of said swash plate assembly has an aperture formed therein, said pin adapted to be received in the aperture of the at least one of said arm of said rotor and said arm of said hub, the aperture of said shoe, and the slot of the other of said arm of said rotor and said arm of said swash plate assembly.

9. (original): The compressor according to claim 8, further comprising a guide disposed between said swash plate assembly and said drive shaft.

10. (original): The compressor according to claim 9, wherein said guide is hollow.

11. (canceled)

12. (original): The compressor according to claim 8, wherein said shoe has a semi-spherical surface formed on a first side to engage the pocket formed in at least one of said arm of said rotor and said arm of said swash plate assembly, and said shoe having a flat surface formed on a second side to slidingly engage the other of said arm of said rotor and said arm of said swash plate assembly.

13. (original): The compressor according to claim 8, wherein an other of said arm of said rotor and said arm of said swash plate assembly has at least one slot formed therein to slidingly engage said shoe.

14. (canceled)

15. (currently amended): A hinge mechanism for a variable displacement compressor comprising:

a rotor adapted to be mounted on and rotated by a drive shaft;

a hub adapted to be slidably mounted on the drive shaft to thereby change an inclination angle thereof and to rotate with said rotor, wherein at least one of said rotor and said hub has a first arm extending outwardly therefrom, and the other of said rotor and said hub has a pair of second arms extending outwardly therefrom, and wherein at least one of the first arm and the pair of second arms has a pair of pockets formed therein; and

a pair of shoes, each adapted to be seated in a respective one of the pair of pockets, pocket formed in at least one of the first arm and the second arms, wherein said shoes facilitate a slanting of said hub and transfer rotation from said rotor to said hub; hub; and

a pin, wherein an other of the first arm and the second arms include a slot formed therein to receive said pin, each of said shoes having a central aperture formed therein, and the at least one of the first arm and the second arms include an aperture formed therein, said pin adapted to be received in the aperture of the at

least one of the first arm and the second arms, the aperture of each of said shoes, and the slot of the other of the first arm and the second arm to form a hinge connection between said rotor and said hub.

16. (original): The hinge mechanism according to claim 15, further comprising a guide disposed between said hub and the drive shaft.

17. (canceled)

18. (original): The hinge mechanism according to claim 15, wherein said shoes have a semi-spherical surface formed on a first side to engage the pocket formed in at least one of the first arm and the second arms, and said shoes having a flat surface formed on a second side to slidingly engage the other of the first arm and the second arms.

19. (original): The hinge mechanism according to claim 15, wherein an other of the first arm and the second arms include at least one slot formed therein to slidingly engage said shoes.

20. (canceled)